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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------|-------------|----------------------|--------------------------|------------------|
| 10/774,307 | 02/06/2004 | Nicola Funnell | 1578.601 | 5431 |
| 54120 | 7590 | 07/05/2007 | EXAMINER | |
| RESEARCH IN MOTION, LTD | | | DEICHMEISTER, NICHOLAS F | |
| 102 DECKER CT. | | | ART UNIT | PAPER NUMBER |
| SUITE 180 | | | 2616 | |
| IRVING, TX 75062 | | | MAIL DATE | DELIVERY MODE |
| | | | 07/05/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|-------------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/774,307 | FUNNELL ET AL. |
| | Examiner Nick Deichmeister | Art Unit 2616 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 06 February 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-13 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 06 February 2006 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
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| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Claim Objections

1. Claim 4 is objected to because of the following informalities: presumed typographical errors on lines 3 and 4. Appropriate correction is required.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. **Claims 1-3, 5-9 and 11-13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 and 8-10 of copending Application No. 10/774306. Although the conflicting claims are not identical, they are not patentably distinct from each**

other because the claimed limitations are equivalent. See explanation and table below.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. Claims 4 and 10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5 and 8 of copending Application No. 10/774306 in view of Yi et al (U.S. Patent Application Publication No. US 2003/0007459 A1). See explanation and table below.

This is a provisional obviousness-type double patenting rejection.

Below is a comparison of the respective claims. **Bold** sections of claims from the instant application indicate non-identical features found in claims from the copending application, also marked in **bold**, or by one or more secondary references, shown below.

| Instant Application No. 10/774307 | Copending Application No. 10/774306 |
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| Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined | Claim 1: A method of operating a device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, wherein said SDU comprises information indicative of a process, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to |

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| <p>number N of times; and in response to N further signals indicative of said discard, causing said RRC layer to submit to said RLC layer a CELL UPDATE message indicative of an unrecoverable error in said RLC layer for emission in response thereto.</p> | <p>said lower layer a predetermined number N of times; and in response to N further signals indicative of said discard, causing said RRC layer to submit to said RLC layer a failure response message indicative that said process indicated by the information of the SDU has failed.</p> <p>Claim 4: A method according to claim 1, wherein if said RLC layer discards said failure response message, said method further comprises causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard, submitting by said RRC layer to said RLC layer of a CELL UPDATE indicative of an unrecoverable error in said RLC layer for emission in response thereto.</p> |
| <p>Claim 2: A method according to claim 1, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> | <p>Claim 2: A method according to claim 1, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> |
| <p>Claim 3: A method according to claim 1, wherein N=0.</p> | <p>Claim 3: A method according to claim 1, wherein N=0.</p> |
| <p>Claim 4: A method of operating a mobile communications network having at least one cell, said cell having at least one user communication device and at least one network control device for communicating with the or each user communication device, the or each user device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC</p> | <p>Claim 1: A method of operating a device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, wherein said SDU comprises information indicative of a process, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said lower layer a predetermined number N of times; and in response to N further</p> |

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| <p>layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard submitting by said RRC layer to said RLC layer of a CELL UPDATE message arranged to cause the network control device to emit for said user communication device a CELL UPDATE CONFIRM message arranged to cause said user device to reconfigure to a determined state.</p> | <p>signals indicative of said discard, causing said RRC layer to submit to said RLC layer a failure response message indicative that said process indicated by the information of the SDU has failed.</p> <p>Claim 5: A method according to claim 1, wherein if said RLC layer discards said failure response message, said method further comprises submitting by said RRC layer to said RLC layer of a CELL UPDATE message arranged to cause the network control device to emit for said user device a CELL UPDATE CONFIRM message arranged to cause said user device to reconfigure to a determined state.</p> |
| <p>Claim 5: A method according to claim 4, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> | <p>Claim 2: A method according to claim 1, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> |
| <p>Claim 6: A method according to claim 4, wherein N=0.</p> | <p>Claim 3: A method according to claim 1, wherein N=0.</p> |
| <p>Claim 7: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising: in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard, releasing the connection between peer layers at the said device and the said network and entering an idle mode.</p> | <p>Claim 1: A method of operating a device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, wherein said SDU comprises information indicative of a process, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said lower layer a predetermined number N of times; and in response to N further signals indicative of said discard, causing said RRC layer to submit to said RLC layer a failure response message indicative that</p> |

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| | <p>said process indicated by the information of the SDU has failed.</p> <p>Claim 6: A method according to claim 1, wherein if said RLC layer discards said failure response message, said method further comprises releasing connection between peer layers at the said device and the said network and entering an idle mode.</p> |
| <p>Claim 8: A method according to claim 7, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> | <p>Claim 2: A method according to claim 1, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> |
| <p>Claim 9: A method according to claim 7, wherein N=0.</p> | <p>Claim 3: A method according to claim 1, wherein N=0.</p> |
| <p>Claim 10: A method of operating a user device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number of times N and in response to N further signals indicative of said discard: performing an error recovery procedure; if said error recovery procedure occurs during an ongoing procedure for which special action is specified in the relevant standard specification, executing that action appropriate to said error recovery procedure occurring during that ongoing procedure.</p> | <p>Claim 1: A method of operating a device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, wherein said SDU comprises information indicative of a process, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said lower layer a predetermined number N of times; and in response to N further signals indicative of said discard, causing said RRC layer to submit to said RLC layer a failure response message indicative that said process indicated by the information of the SDU has failed.</p> <p>Claim 8: A method of operating a device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an</p> |

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| | <p>RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, wherein said SDU comprises information indicative of a process, the method comprising in response to a submission of an SDU by said RRC layer to said RLC layer, starting a timing process in the RRC layer; in response to an indication that the timing process has reached a predetermined timeout, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, on each occasion starting said timing process; and in response to N further timeout signals, causing said RRC layer to submit to said RLC layer a failure response message indicative that said process indicated by the information of the SDU has failed.</p> |
| <p>Claim 11: A method according to claim 10, wherein said error recovery procedure comprises a CELL UPDATE procedure.</p> | <p>Claim 12: A method according to claim 8, wherein if said RLC layer discards said failure response message, said method further comprises submitting by said RRC layer to said RLC layer of a CELL UPDATE arranged to cause the network control device to emit for said user device a CELL UPDATE CONFIRM message arranged to cause said user device to reconfigure to a determined state.</p> |
| <p>Claim 12: A method according to claim 10, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> | <p>Claim 9: A method according to claim 8, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> |
| <p>Claim 13: A method according to claim 10, wherein N=0.</p> | <p>Claim 10: A method according to claim 8, wherein N=0.</p> |

Regarding Claims 4 and 10

Application No. 10/774306 discloses the features of the instant application as discussed above. **Application No. 10/774306 does not disclose the following features:**

Regarding claim 4, having at least one cell.

Regarding claim 10, if said error recovery procedure occurs during an ongoing procedure for which special action is specified in the relevant standard specification, executing that action appropriate to said error recovery procedure occurring during that ongoing procedure.

Yi et al (U.S. Patent Application Publication No. US 2003/0007459 A1) discloses a method for controlling retransmission of information using state variables in a radio communication system, comprising the following features:

Regarding claim 4, having at least one cell (par. 0006, lines 7-10, UMTS).

Regarding claim 10, if said error recovery procedure occurs during an ongoing procedure (fig. 9, transmitting MRW instruction 92) for which special action is specified in the relevant standard specification (par. 0005, standardization organizations), executing (fig. 9, process step 96) that action appropriate to said error recovery procedure occurring during that ongoing procedure (fig. 9, process step 96 occurs within the process of re-transmission (see par. 0092, illustration of the process of re-transmission of the MRW instruction)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Application No. 10/774307 by using the features, as taught by Yi et al, in order to prevent wasting radio resources (Yi et al, abstract, line 10).

5. Claims 1-6, 8-9 and 11-13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 10/774059. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed limitations are equivalent. See explanation and table below.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. Claim 7 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 7 of copending Application No. 10/774059 in view of Brame et al (U.S. Patent No. 5,253,253). See explanation and table below.

This is a provisional obviousness-type double patenting rejection.

7. Claim 10 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/774059 in view of Yi et al (U.S. Patent Application Publication No. US 2003/0007459 A1). See explanation and table below.

This is a provisional obviousness-type double patenting rejection.

Below is a comparison of the respective claims. **Bold** sections of claims from the instant application indicate non-identical features found in claims from the copending application, also marked in **bold**, or by one or more secondary references, shown below.

| Instant Application No. 10/774307 | Copending Application No. 10/774059 |
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| <p>Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard, causing said RRC layer to submit to said RLC layer a CELL UPDATE message indicative of an unrecoverable error in said RLC layer for emission in response thereto.</p> | <p>Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process in the RRC layer, the method comprising in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer an error message indicative of an unrecoverable error in said RLC layer for emission in response thereto.</p> <p>Claim 4: A method of operating a mobile communications network having at least one cell, said cell having at least one user communication device and at least one network control device for communicating with the or each user communication device, the or each user device operating using a protocol having a physical layer, a user layer and at least a RRC (radio resource control) layer and an RLC (radio</p> |

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| | <p>link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process, the method comprising in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer a first message arranged to cause the network control device to emit for said user communication device a second message arranged to cause said user device to reconfigure to a determined state.</p> <p>Claim 5: A method according to claim 4, wherein said first message is a CELL UPDATE message and the second message is a CELL UPDATE CONFIRM message.</p> |
| <p>Claim 2: A method according to claim 1, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> | <p>Claim 2: A method according to claim 1, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> |
| <p>Claim 3: A method according to claim 1, wherein N=0.</p> | <p>Claim 3: A method according to claim 1, wherein N=0.</p> |
| <p>Claim 4: A method of operating a mobile communications network having at least one cell, said cell having at least one user communication device and at least one network control device for communicating with the or each user communication device, the or each user device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS, wherein the RRC</p> | <p>Claim 4: A method of operating a mobile communications network having at least one cell, said cell having at least one user communication device and at least one network control device for communicating with the or each user communication device, the or each user device operating using a protocol having a physical layer, a user layer and at least a RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system,</p> |

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| <p>layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard submitting by said RRC layer to said RLC layer of a CELL UPDATE message arranged to cause the network control device to emit for said user communication device a CELL UPDATE CONFIRM message arranged to cause said user device to reconfigure to a determined state.</p> | <p>wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process, the method comprising in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer a first message arranged to cause the network control device to emit for said user communication device a second message arranged to cause said user device to reconfigure to a determined state.</p> <p>Claim 5: A method according to claim 4, wherein said first message is a CELL UPDATE message and the second message is a CELL UPDATE CONFIRM message.</p> |
| <p>Claim 5: A method according to claim 4, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> | <p>Claim 6: A method according to claim 4, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> |
| <p>Claim 6: A method according to claim 4, wherein N=0.</p> | <p>Claim 7: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process, the method comprising: in response to said timer process reaching a predetermined timeout value: causing said</p> |

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| | <p>RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further timeout signals, releasing connection between peer layers at the said device and the said network.</p> <p>Claim 9: A method according to claim 7, wherein N=0.</p> |
| <p>Claim 7: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising: in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard, releasing the connection between peer layers at the said device and the said network and entering an idle mode.</p> | <p>Claim 7: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process, the method comprising: in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further timeout signals, releasing connection between peer layers at the said device and the said network.</p> |
| <p>Claim 8: A method according to claim 7, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> | <p>Claim 8: A method according to claim 7, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> |
| <p>Claim 9: A method according to claim 7, wherein N=0.</p> | <p>Claim 9: A method according to claim 7, wherein N=0.</p> |
| <p>Claim 10: A method of operating a user device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS, wherein the RRC layer is arranged to submit an SDU to the RLC layer for</p> | <p>Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is</p> |

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| <p>communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number of times N and in response to N further signals indicative of said discard: performing an error recovery procedure; if said error recovery procedure occurs during an ongoing procedure for which special action is specified in the relevant standard specification, executing that action appropriate to said error recovery procedure occurring during that ongoing procedure.</p> | <p>arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process in the RRC layer, the method comprising in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer an error message indicative of an unrecoverable error in said RLC layer for emission in response thereto.</p> |
| <p>Claim 11: A method according to claim 10, wherein said error recovery procedure comprises a CELL UPDATE procedure.</p> | <p>Claim 4: A method of operating a mobile communications network having at least one cell, said cell having at least one user communication device and at least one network control device for communicating with the or each user communication device, the or each user device operating using a protocol having a physical layer, a user layer and at least a RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process, the method comprising in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer a first message arranged to cause the network control device to emit for said user communication device a</p> |

| | |
|--|--|
| | <p>second message arranged to cause said user device to reconfigure to a determined state.</p> <p>Claim 5: A method according to claim 4, wherein said first message is a CELL UPDATE message and the second message is a CELL UPDATE CONFIRM message.</p> |
| <p>Claim 12: A method according to claim 10, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> | <p>Claim 6: A method according to claim 4, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.</p> |
| <p>Claim 13: A method according to claim 10, wherein N=0.</p> | <p>Claim 2: A method according to claim 1, wherein N=0.</p> |

Regarding Claim 7

Application No. 10/774306 discloses the features of the instant application as discussed above. **Application No. 10/774059 does not disclose the following features:**

Regarding claim 7, entering an idle mode.

Brame et al discloses a message bus slot update/idle control in RF trunking multisite switch, comprising the following features:

Regarding claim 7, entering an idle mode (col. 5, line 7, slot idle messages).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Application No. 10/774059 by using the features, as taught by Brame et al, in order to allow a caller in one site area to communicate with a callee in another area (Brame et al, col. 2, lines 16-19).

Regarding Claim 10

Application No. 10/774306 discloses the features of the instant application as discussed above. **Application No. 10/774059 does not disclose the following features:**

Regarding claim 10, if said error recovery procedure occurs during an ongoing procedure for which special action is specified in the relevant standard specification, executing that action appropriate to said error recovery procedure occurring during that ongoing procedure.

Yi et al (U.S. Patent Application Publication No. US 2003/0007459 A1) discloses a method for controlling retransmission of information using state variables in a radio communication system, comprising the following features:

Regarding claim 10, if said error recovery procedure occurs during an ongoing procedure (fig. 9, transmitting MRW instruction 92) for which special action is specified in the relevant standard specification (par. 0005, standardization organizations), executing (fig. 9, process step 96) that action appropriate to said error recovery procedure occurring during that ongoing procedure (fig. 9, process step 96 occurs within the process of re-transmission (see par. 0092, illustration of the process of re-transmission of the MRW instruction)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Application No. 10/774059 by using the features, as taught by Yi et al, in order to prevent wasting radio resources (Yi et al, abstract, line 10).

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. **Claim 10 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.** Claim 10 recites, *“if said error recovery procedure occurs during an ongoing procedure for which special action is specified in the relevant standard specification, executing that action appropriate to said error recovery procedure occurring during that ongoing procedure.”* The examiner notes that the above claim language refers to no specific limitations, and said limitations are not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. **Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claim 10 recites, “if said error recovery procedure occurs during **an ongoing procedure for which special action is specified in the relevant standard specification, executing that action appropriate to said error recovery procedure occurring during that ongoing procedure.**” The examiner notes that the claim language above refers to no specific limitations, and said limitations are not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. **Claims 1-6 and 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Yi et al (U.S. Patent Application Publication No. US 2003/0007459 A1).**

Yi et al discloses a method for controlling retransmission of information using state variables in a radio communication system, comprising the following features:

Regarding claim 1, a method of operating a communication device in a mobile communications network (par. 0003, lines 1-3, method for re-transmitting data or control information in the radio link control layer of an IMT-2000 radio communication system), the device operating using a protocol (par. 0015 protocol data unit) having a physical

layer (fig. 1, Transport Channel PHY; par. 0011, line 5, Physical Layer), and at least an RRC (radio resource control) layer (fig. 1, RRC (third layer)) and an RLC (radio link control) layer (fig. 1, RLC (second layer)) of a UMTS system (par. 0006, lines 7-10, UMTS), wherein the RRC layer is arranged to submit (fig. 1, connection between RRC and RLC) an SDU (fig. 2, RLC SDU; par. 0019, lines 1-4, RLC SDU comes from the upper layer) to the RLC layer (par. 0019, lines 1-5, RLC layer performs segmentation and concatenation of the RLC SDU) for communication (par. 0015, transmitted to the MAC layer) using the physical layer (fig. 1, connections among RRC layer, RLC layer and Transport Channel PHY), the method comprising in response to a signal (par. 0024, RLC layer receives the state information with which success of transmission can be judged; par. 0058, line 4, sender reports the status) from said RLC layer (par. 0024, RLC layer receives the state information with which success of transmission can be judged), said signal being indicative of discard (par. 0024, RLC layer receives the state information with which success of transmission can be judged) of said SDU: causing said RRC layer to resubmit (par. 0085, lines 10-11, the information is re-transmitted) said SDU to said RLC layer a predetermined number N (par. 0085, lines 12-15, when the state variable becomes same as or larger than the critical value, the retransmission process is terminated; fig. 7, process steps 71, 72, 73, 74, 75) of times; and in response to N further signals (fig. 7, process steps 71, 72, 73, 74, 75) indicative (fig. 7, transmission success question step 73) of said discard, causing said RRC layer to submit (par. 0082, lines 11-13, the sender sends a reset instruction for instructing reset of the radio link control layer to the receiver) to said RLC layer (par. 0093, lines 13-14,

error processing process, such as reset of the RLC layer) a CELL UPDATE message (par. 0042, line 5, further restoration is impossible) indicative of an unrecoverable error (par. 0042, line 5, further restoration is impossible) in said RLC layer for emission in response thereto.

Regarding claim 2, further comprising setting an operating mode (par. 0024, lines 1-2, acknowledged mode) wherein an acknowledgement (par. 0027, line 6, positive acknowledgement) of successful reception (par. 0027, line 5, received RLC PDU) of said SDU is awaited (par. 0024, lines 1-2, acknowledged mode).

Regarding claim 3, wherein N=0 (par. 0023, lines 1-3, unacknowledged mode, wherein re-transmission is not supported). The examiner notes that having no re-transmission is equivalent to re-transmitting zero times.

Regarding claim 4, a method of operating a mobile communications network (par. 0003, lines 1-3, method for re-transmitting data or control information in the radio link control layer of an IMT-2000 radio communication system) having at least one cell (par. 0006, lines 7-10, UMTS), said cell having at least one user communication device (par. 0012, lines 9-10, user equipments) and at least one network control device (par. 0008, lines 7-8, radio network controller (RNC)) for communicating (par. 0008, lines 7-8, interface among a base station and RNC) with the or each user communication device (par. 0008, line 9, core network), the or each user device operating using a protocol (par. 0015 protocol data unit) having a physical layer (fig. 1, Transport Channel PHY; par. 0011, line 5, Physical Layer), and at least an RRC (radio resource control) layer (fig. 1, RRC (third layer)) and an RLC (radio link control) layer (fig. 1, RLC (second

layer)) of a UMTS (par. 0006, lines 7-10, UMTS), wherein the RRC layer is arranged to submit (fig. 1, connection between RRC and RLC) an SDU (fig. 2, RLC SDU; par. 0019, lines 1-4, RLC SDU comes from the upper layer) to the RLC layer (par. 0019, lines 1-5, RLC layer performs segmentation and concatenation of the RLC SDU) for communication (par. 0015, transmitted to the MAC layer) using the physical layer (fig. 1, connections among RRC layer, RLC layer and Transport Channel PHY), the method comprising in response to a signal (par. 0024, RLC layer receives the state information with which success of transmission can be judged; par. 0058, line 4, sender reports the status) from said RLC layer (par. 0024, RLC layer receives the state information with which success of transmission can be judged), said signal being indicative of discard (par. 0024, RLC layer receives the state information with which success of transmission can be judged) of said SDU, causing said RRC layer to resubmit (par. 0085, lines 10-11, the information is re-transmitted) said SDU to said RLC layer a predetermined number N (par. 0085, lines 12-15, when the state variable becomes same as or larger than the critical value, the retransmission process is terminated; fig. 7, process steps 71, 72, 73, 74, 75) of times; and in response to N further signals (fig. 7, process steps 71, 72, 73, 74, 75) indicative (fig. 7, transmission success question step 73) of said discard submitting (par. 0082, lines 11-13, the sender sends a reset instruction for instructing reset of the radio link control layer to the receiver) by said RRC layer to said RLC layer (par. 0093, lines 13-14, error processing process, such as reset of the RLC layer) of a CELL UPDATE message (par. 0042, line 5, further restoration is impossible) arranged to cause the network control device to emit for said user communication

device a CELL UPDATE CONFIRM message (par. 0041, line 2, RESET PDU) arranged to cause said user device to reconfigure to a determined state (par. 0039, lines 4-5, resets the operation of the RLC layer; fig. 5, process steps 51-55).

Regarding claim 5, further comprising setting an operating mode (par. 0024, lines 1-2, acknowledged mode) wherein an acknowledgement (par. 0027, line 6, positive acknowledgement) of successful reception (par. 0027, line 5, received RLC PDU) of said SDU is awaited (par. 0024, lines 1-2, acknowledged mode).

Regarding claim 6, wherein N=0 (par. 0023, lines 1-3, unacknowledged mode, wherein re-transmission is not supported). The examiner notes that having no re-transmission is equivalent to re-transmitting zero times.

Regarding claim 10, a method of operating a user device in a mobile communications network (par. 0003, lines 1-3, method for re-transmitting data or control information in the radio link control layer of an IMT-2000 radio communication system), the device operating using a protocol (par. 0015 protocol data unit) having a physical layer (fig. 1, Transport Channel PHY; par. 0011, line 5, Physical Layer), and at least an RRC (radio resource control) layer (fig. 1, RRC (third layer)) and an RLC (radio link control) layer (fig. 1, RLC (second layer)) of a UMTS (par. 0006, lines 7-10, UMTS), wherein the RRC layer is arranged to submit (fig. 1, connection between RRC and RLC) an SDU (fig. 2, RLC SDU; par. 0019, lines 1-4, RLC SDU comes from the upper layer) to the RLC layer (par. 0019, lines 1-5, RLC layer performs segmentation and concatenation of the RLC SDU) for communication (par. 0015, transmitted to the MAC layer) using the physical layer (fig. 1, connections among RRC layer, RLC layer and

Transport Channel PHY), the method comprising in response to a signal (par. 0024, RLC layer receives the state information with which success of transmission can be judged; par. 0058, line 4, sender reports the status) from said RLC layer (par. 0024, RLC layer receives the state information with which success of transmission can be judged), said signal being indicative of discard (par. 0024, RLC layer receives the state information with which success of transmission can be judged) of said SDU, causing said RRC layer to resubmit (par. 0085, lines 10-11, the information is re-transmitted) said SDU to said RLC layer a predetermined number of times N (par. 0085, lines 12-15, when the state variable becomes same as or larger than the critical value, the retransmission process is terminated; fig. 7, process steps 71, 72, 73, 74, 75) and in response to N further signals (fig. 7, process steps 71, 72, 73, 74, 75) indicative (fig. 7, transmission success question step 73) of said discard: performing an error recovery procedure (par. 0093, line 13, error processing process; fig. 9, process step 96); if said error recovery procedure occurs during an ongoing procedure (fig. 9, transmitting MRW instruction 92) for which special action is specified in the relevant standard specification (par. 0005, standardization organizations), executing (fig. 9, process step 96) that action appropriate to said error recovery procedure occurring during that ongoing procedure (fig. 9, process step 96 occurs within the process of re-transmission (see par. 0092, illustration of the process of re-transmission of the MRW instruction)).

Regarding claim 11, wherein said error recovery procedure comprises a CELL UPDATE procedure (par. 0042, line 5, further restoration is impossible).

Regarding claim 12, further comprising setting an operating mode (par. 0024, lines 1-2, acknowledged mode) wherein an acknowledgement (par. 0027, line 6, positive acknowledgement) of successful reception (par. 0027, line 5, received RLC PDU) of said SDU is awaited (par. 0024, lines 1-2, acknowledged mode).

Regarding claim 13, wherein N=0 (par. 0023, lines 1-3, unacknowledged mode, wherein re-transmission is not supported). The examiner notes that having no re-transmission is equivalent to re-transmitting zero times.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. **Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yi et al in view of Brame et al (U.S. Patent No. 5,253,253).**

Yi et al discloses the claimed limitations in paragraph 13 above.

Yi et al further discloses the following features:

Regarding claim 7, a method of operating a communication device in a mobile communications network (par. 0003, lines 1-3, method for re-transmitting data or control information in the radio link control layer of an IMT-2000 radio communication system), the device operating using a protocol (par. 0015 protocol data unit) having a physical layer (fig. 1, Transport Channel PHY; par. 0011, line 5, Physical Layer), and at least an

RRC (radio resource control) layer (fig. 1, RRC (third layer)) and an RLC (radio link control) layer (fig. 1, RLC (second layer)) of a UMTS (par. 0006, lines 7-10, UMTS), wherein the RRC layer is arranged to submit (fig. 1, connection between RRC and RLC) an SDU (fig. 2, RLC SDU; par. 0019, lines 1-4, RLC SDU comes from the upper layer) to the RLC layer (par. 0019, lines 1-5, RLC layer performs segmentation and concatenation of the RLC SDU) for communication (par. 0015, transmitted to the MAC layer) using the physical layer (fig. 1, connections among RRC layer, RLC layer and Transport Channel PHY), the method comprising: in response to a signal (par. 0024, RLC layer receives the state information with which success of transmission can be judged; par. 0058, line 4, sender reports the status) from said RLC layer (par. 0024, RLC layer receives the state information with which success of transmission can be judged), said signal being indicative of discard (par. 0024, RLC layer receives the state information with which success of transmission can be judged) of said SDU, causing said RRC layer to resubmit (par. 0085, lines 10-11, the information is re-transmitted) said SDU to said RLC layer a predetermined number N (par. 0085, lines 12-15, when the state variable becomes same as or larger than the critical value, the retransmission process is terminated; fig. 7, process steps 71, 72, 73, 74, 75) of times; and in response to N further signals (fig. 7, process steps 71, 72, 73, 74, 75) indicative (fig. 7, transmission success question step 73) of said discard.

Regarding claim 8, further comprising setting an operating mode (par. 0024, lines 1-2, acknowledged mode) wherein an acknowledgement (par. 0027, line 6, positive

acknowledgement) of successful reception (par. 0027, line 5, received RLC PDU) of said SDU is awaited (par. 0024, lines 1-2, acknowledged mode).

Regarding claim 9, wherein N=0 (par. 0023, lines 1-3, unacknowledged mode, wherein re-transmission is not supported). The examiner notes that having no re-transmission is equivalent to re-transmitting zero times.

Yi et al does not disclose the following features:

Regarding claim 7, releasing the connection between peer layers at the said device and the said network and entering an idle mode.

Brame et al discloses a message bus slot update/idle control in RF trunking multisite switch, comprising the following features:

Regarding claim 7, releasing the connection (col. 5, line 8, connections are terminated) between peer layers (fig. 4, call to console) at the said device and the said network and entering an idle mode (col. 5, line 7, slot idle messages).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Yi et al by using the features, as taught by Brame et al, in order to allow a caller in one site area to communicate with a callee in another area (Brame et al, col. 2, lines 16-19).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cheng et al (U.S. Patent Application Publication No. 2002/0191544 A1) discloses a method and system for interlayer control between re-

sequencing and retransmission entities Drottar et al (U.S. Patent No. 6,181,704 B1) discloses a method and apparatus for input/output link retry, failure and recovery in a computer network. Laroia et al (U.S. Patent No. 6,816,478 B1) discloses an apparatus and method for use in effecting automatic repeat requests in wireless multiple access communication systems. Ostman (U.S. Patent No. 6,738,370 B2) discloses a method and apparatus implementing retransmission in a communication system providing H-ARQ. Panjak (U.S. Patent No. 6,807,426 B2) discloses a method and apparatus for scheduling transmissions in a communication system. Chuah et al (U.S. Patent No. 6,400,695 B1) discloses methods and apparatus for retransmission based access priority in a communications system. Moulsey (U.S. Patent No. 6,804,206 B1) discloses a radio communication system. Hunt (U.S. Patent No. 6,868,079 B1) discloses a radio communication system with request re-transmission until acknowledged. Kuo et al (U.S. Patent No. 6,961,570 B2) discloses handling of a wireless device re-entering a service area. De Jong et al (U.S. Patent Application Publication No. 2005/0175034) discloses an apparatus and method for operating a communications device in a mobile communications network. Funnell et al (U.S. Patent Application Publication No. 2005/0175033) discloses an apparatus and method for operating a communications device in a mobile communications network. Chen (U.S. Patent Application Publication No. 2003/0207702) discloses enhancement to the recovery mechanism for cell update procedure in cell_dch state. Chen (U.S. Patent Application Publication No. 2005/0054298) discloses handling of an unrecoverable error on a dedicated channel. Wu (U.S. Patent Application Publication No. 2004/0203623)

discloses a scheme to retransmit radio resource control messages during a radio link control reset in a wireless communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nick Deichmeister whose telephone number is (571) 272-9746. The examiner can normally be reached on Monday through Friday (off alternate Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

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